Show Similarities and Differences between the Functions Below:

|  |  |  |  |
| --- | --- | --- | --- |
| Attributes | Function 1  y = 2x + 3 | Function 2  y = 2x2 + 4x + 1 | Function 3  y = 2x + 3 |
| Graph | Tenbytengraph.png | Tenbytengraph.png | Tenbytengraph.png |
| Rate of Change |  |  |  |
| Domain and Range |  |  |  |
| Interval of Increase |  |  |  |
| Interval of Decrease |  |  |  |
| Extrema (max., min) |  |  |  |
| Intercepts  ( x- and y - ) |  |  |  |
| End Behavior |  |  |  |
| Asymptote |  |  |  |
| Symmetry  (even/odd/  neither; axis of symmetry) |  |  |  |

**Describe in words the main differences between the three functions:**

|  |  |  |  |
| --- | --- | --- | --- |
| Attributes | Function 1 (White Squares)  http://www.visualpatterns.org/uploads/3/8/7/2/38721349/7577133_orig.png | Function 2 (Black Squares)  http://www.visualpatterns.org/uploads/3/8/7/2/38721349/7577133_orig.png | Function 3  http://www.visualpatterns.org/uploads/3/8/7/2/38721349/1119417.png |
| Graph | Tenbytengraph.png | Tenbytengraph.png | Tenbytengraph.png |
| Equation(s) |  |  |  |
| Rate of Change |  |  |  |
| Domain and Range |  |  |  |
| Interval of Increase |  |  |  |
| Interval of Decrease |  |  |  |
| Extrema (max., min) |  |  |  |
| Intercepts  (x- and y - ) |  |  |  |
| End Behavior |  |  |  |
| Asymptote |  |  |  |
| Symmetry  (even/odd/  neither; axis of symmetry) |  |  |  |

**Describe in words the main differences between the three functions:**

|  |  |  |  |
| --- | --- | --- | --- |
| Attributes | Situation 1  A theater has 20 seats in the first row, 22 in the second row, 24 in the third row, and so on. | Situation 2  The length of the rectangle is three more than double the width. Write the function of the area of the rectangle in terms of its width. | Situation 3  A country club had 100 members when it first opened. Every year, the number of members doubled (after 1 year, there were 200 members, etc.) |
| Equation(s) |  |  |  |
| Graph | Tenbytengraph.png | Tenbytengraph.png | Tenbytengraph.png |
| Rate of Change |  |  |  |
| Domain and Range |  |  |  |
| Interval of Increase |  |  |  |
| Interval of Decrease |  |  |  |
| Extrema (max., min) |  |  |  |
| Intercepts  ( x- and y - ) |  |  |  |
| End Behavior |  |  |  |
| Asymptote |  |  |  |
| Symmetry  (even/odd/  neither; axis of symmetry) |  |  |  |

**Describe in words the main differences between the three situations:**